HIV/AIDS in the Baltimore-Towson Metropolitan Area: An Epidemiological Profile

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IDEHA Mission

- To improve the health of Marylanders by reducing the transmission of infectious diseases, helping impacted persons live longer, healthier lives, and protecting individuals and communities from environmental health hazards

- We work in partnership with local health departments, providers, community based organizations, and public and private sector agencies to provide public health leadership in the prevention, control, monitoring, and treatment of infectious diseases and environmental health hazards.

Outline

- History
- National Data
- State Data
- Regional Data
- Regional Summary
- Behavioral Surveillance Methods
- Behavioral Surveillance Data

History

MMWR
June 5, 1981 / 30(21);250-2

Pneumocystis Pneumonia – Los Angeles

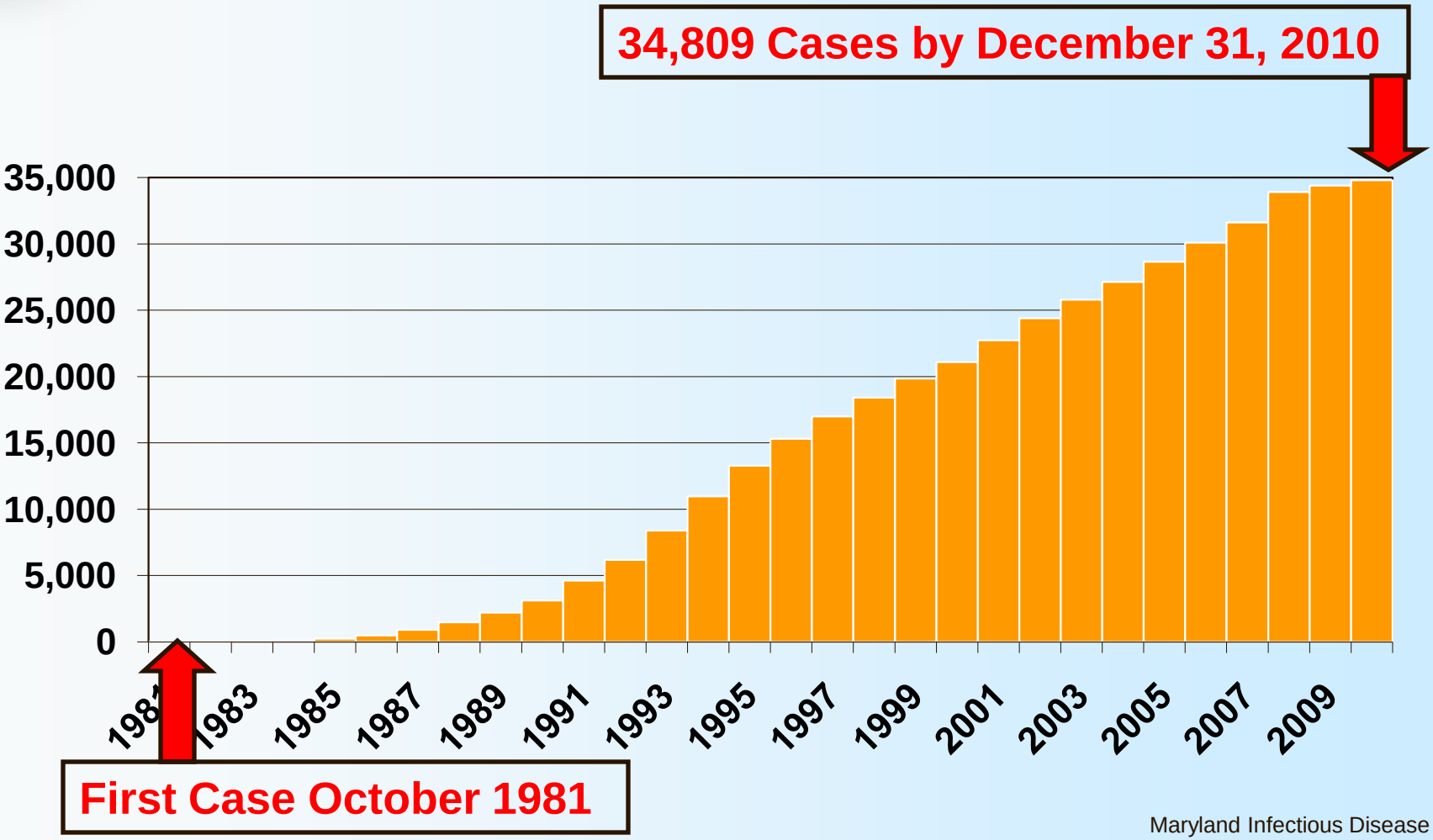
In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed Pneumocystis carinii pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

MMWR
July 4, 1981 / 30(21);305-8

Kaposi's Sarcoma and *Pneumocystis* Pneumonia Among Homosexual Men – New York City and California

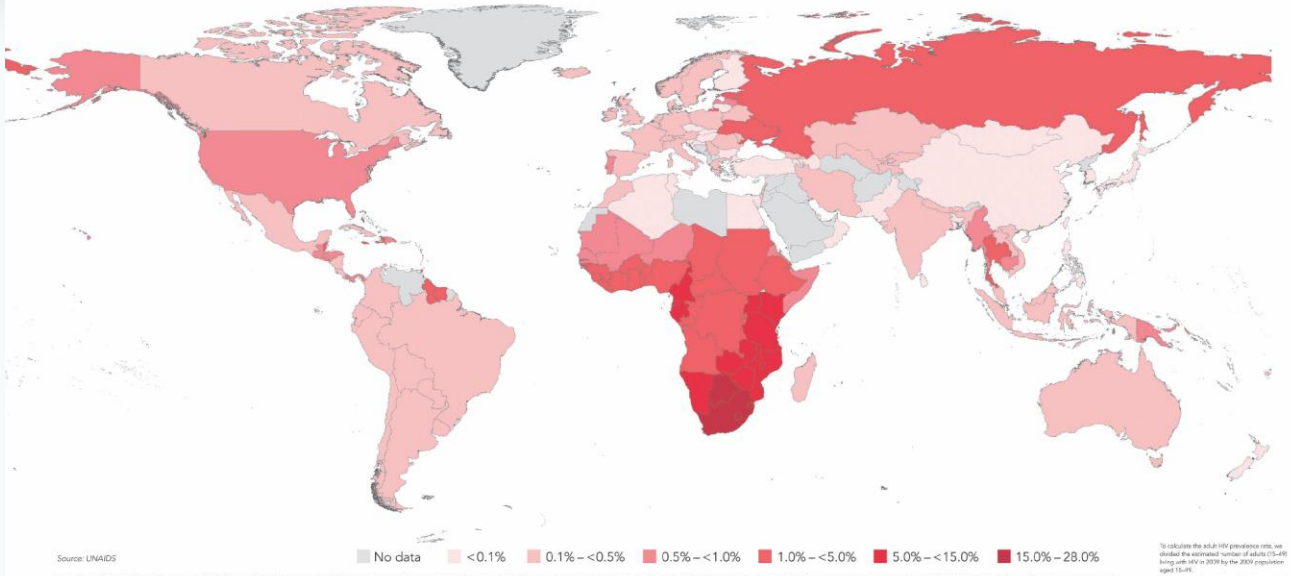
During the past 30 months, Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, has been diagnosed in 26 homosexual men (20 in New York City [NYC], 6 in California). The 26 patients range in age from 26-51 years (mean 39 years). Eight of these patients died (7 in NYC, 1 in California)–all 8 within 24 months after KS was diagnosed.

Maryland AIDS Case Reports



2010: A global view of HIV infection

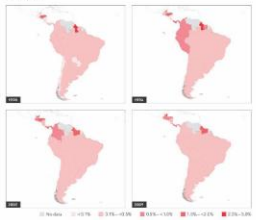
33.3 million people [31.4–35.3 million] living with HIV, 2009



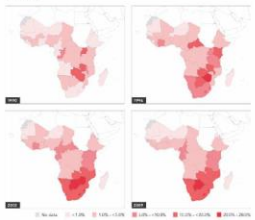
Source: UNAIDS

No data | <0.1% | 0.1%–<0.5% | 0.5%–<1.0% | 1.0%–<5.0% | 5.0%–<15.0% | 15.0%–28.0%

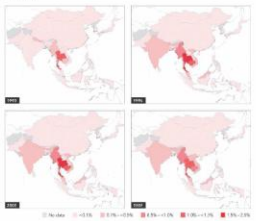
HIV prevalence in Central and South America



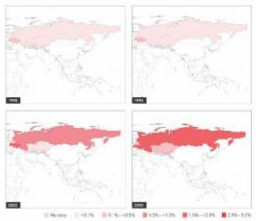
HIV prevalence in sub-Saharan Africa



HIV prevalence in Asia



HIV prevalence in Eastern Europe and Central Asia



UNAIDS

World Health Organization

To calculate the adult HIV prevalence rate, we divided the estimated number of adults (15–49) living with HIV in 2009 by the 2009 population aged 15–49.

Depending on the reliability of the data available, there is more or less certainty surrounding any one estimate. Therefore we present ranges, called 'plausibility bounds' around the estimates. The wider the bound, the more uncertainty there is surrounding the country's estimate. The extent of uncertainty depends mainly on the type of epidemic, and the quality, coverage and consistency of a country's surveillance system and in generalized epidemics, whether or not a population-based survey with HIV testing was conducted. A full description of the methods used to develop plausibility bounds can be found in Sexually Transmitted Infections. 2010; 86 Suppl 2:.

The designation employed and the presentation of the material in this map, including tables and colouring of country areas, do not imply the expression of any opin on whatsoever on the part of UNAIDS or WHO concerning the legal status of any country, territory, city or area of or its authorities, or concerning the delimitation of its frontiers or boundaries.

The UNAIDS Report on the Global AIDS Epidemic 2010 revises the estimate of the number of people living with HIV in 2008 of 33.4 million [31.1 million–35.8 million] published in AIDS epidemic update: November 2009, to 32.6 million [30.9 million–34.7 million] which is within the uncertainty range of the previous estimate. This revision is based on additional data becoming available for many countries, including data from population-based surveys such as in Mozambique.

AIDS Epidemic Update: November 2009 included Mexico in Latin America. The UNAIDS Global Report 2010 includes Mexico in North America and categorizes the rest of Latin America as Central and South America. This report presents trend analysis based on the new definition of these regions.

Source: UNAIDS Report on the Global AIDS Epidemic, 2010.

Estimated adult (15-49) HIV prevalence (%) for countries in 2009

Country/Region	Estimate	[low estimate – high estimate]
Sub-Saharan Africa		
Angola	2.0	[1.6 – 2.4]
Benin	1.2	[0.9 – 1.5]
Botswana	24.8	[21.9 – 27.9]
Burkina Faso	1.2	[0.9 – 1.5]
Burundi	1.3	[0.9 – 1.8]
Cameroon	5.3	[4.6 – 6.0]
Central African Republic	4.7	[4.2 – 5.3]
Chad	3.4	[2.6 – 5.1]
Comoros	0.1	[<0.1 – 0.1]
Congo	3.4	[2.9 – 3.8]
Côte d'Ivoire	3.4	[2.1 – 3.9]
Democratic Republic of the Congo		[1.0 – 1.6]
Equatorial Guinea	1.0	[0.7 – 1.3]
Eritrea	0.8	[0.6 – 1.0]
Ethiopia		[1.0 – 1.2]
Gabon	5.2	[4.2 – 6.2]
Gambia	2.0	[1.2 – 2.9]
Ghana	1.8	[1.4 – 2.0]
Guinea	1.7	[1.1 – 1.9]
Guinea-Bissau	2.5	[2.0 – 3.0]
Kenya	6.3	[5.1 – 6.7]
Lesotho	23.6	[22.3 – 25.0]
Liberia	1.7	[1.2 – 2.3]
Madagascar	0.2	[0.1 – 0.3]
Malawi	11.0	[10.0 – 12.0]
Mali	1.0	[0.6 – 1.3]
Mauritania	0.7	[0.6 – 0.9]
Mauritius	1.0	[0.7 – 1.3]
Mozambique	11.5	[10.6 – 12.2]
Namibia	13.1	[11.1 – 15.1]
Niger	0.8	[0.6 – 0.9]
Nigeria	3.6	[3.1 – 4.0]
Rwanda	2.9	[2.9 – 3.1]
Senegal	0.9	[0.7 – 1.0]
Sierra Leone	1.6	[1.4 – 2.1]
South Africa	17.8	[17.2 – 18.3]
Swaziland	21.9	[21.9 – 27.0]
Togo	3.2	[2.6 – 3.8]
Uganda	5.5	[5.3 – 5.9]
United Republic of Tanzania	5.6	[5.3 – 6.1]
Zambia	13.5	[12.8 – 14.1]
Zimbabwe	14.3	[13.4 – 15.0]
East Asia		
China	0.1	[0.1 – 0.1]
Democratic People's Republic of Korea		
Japan	<0.1	[<0.1 – <0.1]
Mongolia	<0.1	[<0.1 – <0.1]
Republic of Korea	<0.1	[<0.1 – <0.1]
Oceania		
Australia	0.1	[0.1 – 0.2]
Fiji	0.1	[0.1 – 0.2]
New Zealand	0.1	[0.1 – 0.1]
Papua New Guinea	0.9	[0.6 – 1.0]
South and South-East Asia		
Bangladesh	<0.1	[<0.1 – <0.1]
Bhutan	0.2	[0.1 – 0.2]
Cambodia	0.5	[0.4 – 0.6]
India	0.3	[0.2 – 0.4]
Indonesia	0.2	[0.1 – 0.3]
Lao People's Democratic Republic	0.2	[0.2 – 0.4]
Malaysia	0.4	[0.3 – 0.5]
Maldives	<0.1	[<0.1 – <0.1]
Myanmar	0.6	[0.5 – 0.7]
Nepal	0.4	[0.3 – 0.5]
Pakistan	0.1	[0.1 – 0.1]
Philippines	<0.1	[<0.1 – <0.1]
Singapore	0.1	[0.1 – 0.1]
Sri Lanka	<0.1	[<0.1 – <0.1]
Thailand	1.3	[1.0 – 1.6]
Viet Nam	0.4	[0.2 – 0.5]
Eastern Europe and Central Asia		
Armenia	0.1	[0.1 – 0.1]
Azerbaijan	0.1	[<0.1 – 0.1]
Belarus	0.3	[0.2 – 0.3]
Georgia	0.1	[0.1 – 0.2]
Kazakhstan	0.1	[0.1 – 0.2]
Kyrgyzstan	0.2	[0.2 – 0.3]
Republic of Moldova	0.6	[0.4 – 0.8]
Russian Federation	1.0	[0.9 – 1.2]
Tajikistan	0.2	[0.1 – 0.3]
Ukraine	1.1	[1.0 – 1.3]
Uzbekistan	0.1	[0.1 – 0.1]
Western and Central Europe		
Austria	0.3	[0.2 – 0.4]
Belgium	0.2	[0.2 – 0.3]
Bulgaria	0.1	[0.1 – 0.1]
Croatia	<0.1	[<0.1 – <0.1]
Czech Republic	<0.1	[<0.1 – <0.1]
Denmark	0.2	[0.1 – 0.2]
Estonia	1.2	[1.0 – 1.5]
Finland	0.1	[0.1 – 0.1]
France	0.4	[0.2 – 0.7]
Germany	0.1	[0.1 – 0.2]
Greece	0.1	[0.1 – 0.2]
Hungary	<0.1	[<0.1 – <0.1]
Iceland	0.3	[0.2 – 0.4]
Ireland	0.2	[0.1 – 0.3]
Israel	0.2	[0.1 – 0.2]
Italy	0.4	[0.3 – 0.5]
Latvia	0.7	[0.5 – 0.7]
Lithuania	0.1	[<0.1 – 0.1]
Luxembourg	0.3	[0.2 – 0.4]
Malta	0.1	[0.1 – 0.1]
Netherlands	0.2	[0.1 – 0.3]
Norway	0.1	[0.1 – 0.2]
Poland	0.1	[0.1 – 0.2]
Portugal	0.4	[0.4 – 0.7]
Romania	0.1	[0.1 – 0.1]
Serbia	0.1	[0.1 – 0.2]
Slovakia	<0.1	[<0.1 – <0.1]
Slovenia	<0.1	[<0.1 – 0.1]
Spain	0.4	[0.3 – 0.4]
Sweden	0.1	[0.1 – 0.2]
Switzerland	0.4	[0.3 – 0.5]
Turkey	<0.1	[<0.1 – <0.1]
United Kingdom	0.2	[0.2 – 0.3]
Middle East and North Africa		
Algeria	0.1	[0.1 – 0.1]
Djibouti	1.1	[1.0 – 1.2]
Egypt	<0.1	[<0.1 – <0.1]
Iran (Islamic Republic of)	0.2	[0.1 – 0.2]
Lebanon	0.1	[0.1 – 0.2]
Morocco	0.1	[0.1 – 0.2]
Oman	0.1	[<0.1 – 0.1]
Qatar	<0.1	[<0.1 – <0.1]
Somalia	0.7	[0.5 – 1.0]
Sudan	1.1	[0.9 – 1.4]
Syrian Arab Republic	<0.1	[<0.1 – 0.1]
North America		
Canada	0.3	[0.2 – 0.4]
Mexico	0.3	[0.2 – 0.4]
United States of America	0.6	[0.4 – 0.8]
Caribbean		
Bahamas	1.1	[1.1 – 1.4]
Barbados	1.4	[1.2 – 1.6]
Cuba	0.1	[0.1 – 0.2]
Dominican Republic	0.9	[0.7 – 1.0]
Haiti	1.9	[1.7 – 2.1]
Jamaica	1.7	[1.5 – 2.0]
Trinidad and Tobago	1.5	[1.3 – 2.2]
Central and South America		
Argentina	0.5	[0.3 – 0.6]
Belize	2.3	[2.0 – 2.8]
Bolivia	0.2	[0.1 – 0.3]
Brazil		[0.3 – 0.6]
Chile	0.4	[0.2 – 0.5]
Colombia	0.5	[0.4 – 0.7]
Costa Rica	0.3	[0.2 – 0.4]
Ecuador	0.4	[0.2 – 0.6]
El Salvador	0.8	[0.6 – 1.1]
Guatemala	0.8	[0.6 – 1.0]
Guyana	2.5	[2.1 – 2.9]
Honduras	0.2	[0.1 – 0.3]
Nicaragua	0.2	[0.1 – 0.2]
Panama	0.9	[0.6 – 0.9]
Paraguay	0.3	[0.2 – 0.4]
Peru	0.4	[0.3 – 0.5]
Suriname	1.5	[0.7 – 1.4]
Uruguay	0.5	[0.4 – 0.6]
Venezuela		

National Data

2009 Estimated AIDS Diagnoses, Ranked by Rates

STATE/TERRITORY	Cases	Rate per 100,000
1. District of Columbia	718	119.8
2. New York	4,799	24.6
3. Florida	4,392	23.7
4. Maryland	***1,134***	***19.9***
5. Louisiana	869	19.4
6. Puerto Rico	735	18.5
7. Delaware	159	18.0
8. New Jersey	1,475	16.9
9. South Carolina	713	15.6
10. Georgia	1,391	14.1
United States	*34,993*	*11.2*

CDC. HIV Surveillance Report, 2009. Vol. 21. Table 20.

2009 Estimated AIDS Diagnoses, Ranked by Rates

METROPOLITAN AREA	Cases	Rate per 100,000
1 Miami, FL	2,061	37.2
2. Baton Rouge, LA	241	30.6
3. Jacksonville, FL	387	29.1
4. New York, NY-NJ-PA	5,153	27.0
5. Washington, DC-VA-MD-WV	***1,455***	***26.6***
6. Columbia, SC	175	23.5
7. Memphis, TN-MS-AR	305	23.3
8. Orlando, FL	485	23.3
9. New Orleans-Metairie-Kenner, LA	274	23.0
10. Baltimore-Towson, MD	***614***	***22.8***
United States	*34,981*	*11.2*

CDC. HIV Surveillance Report, 2009. Vol. 21. Table 24.

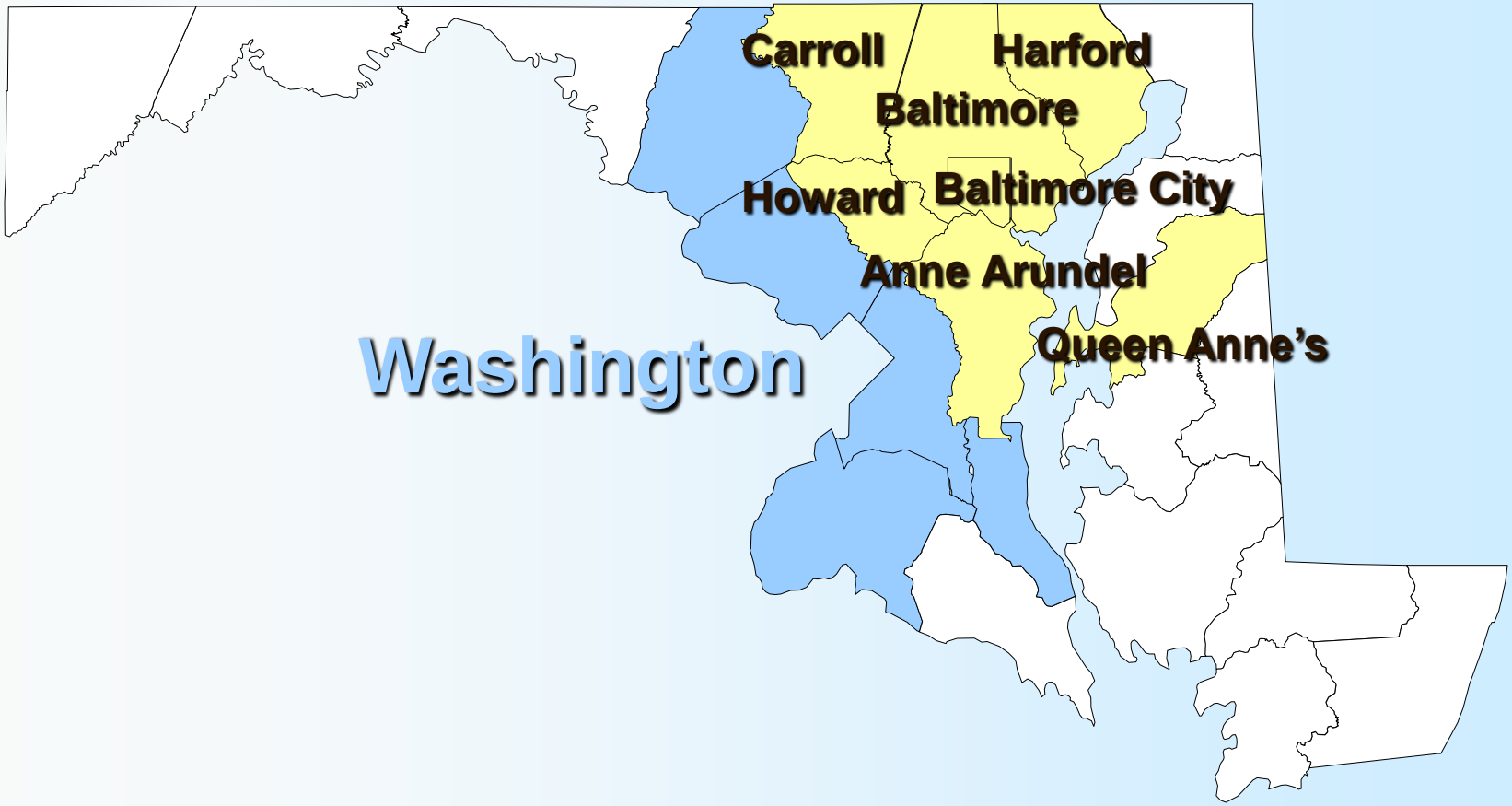
State Data

Maryland HIV/AIDS Statistics

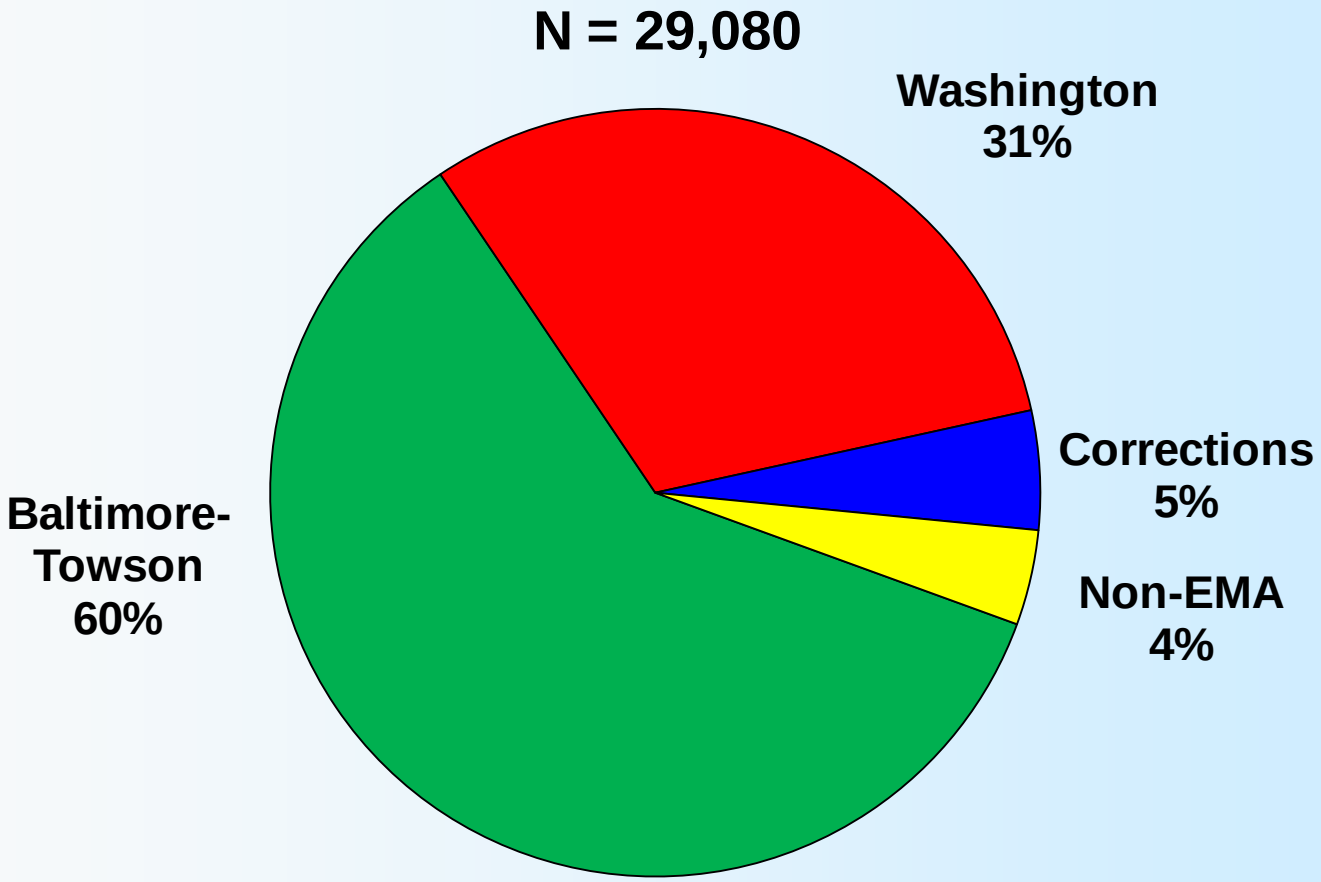
Reported Diagnoses (during 2009)	No.	per 100,000	1 in X
HIV	1,521	26.7	
AIDS	692	12.1	
Living Cases (on 12/31/09)			
HIV without AIDS	12,373	217.1	
HIV with AIDS	16,707	293.1	
Total HIV	29,080	510.2	196
Cumulative (through 12/31/10)			
Total HIV	48,812		
HIV with AIDS	34,809	(71.3% of HIV)	
AIDS Deaths	17,741	(51.0% of AIDS)	

Using data as reported through 12/31/2010

Maryland Ryan White Eligible Metropolitan Areas



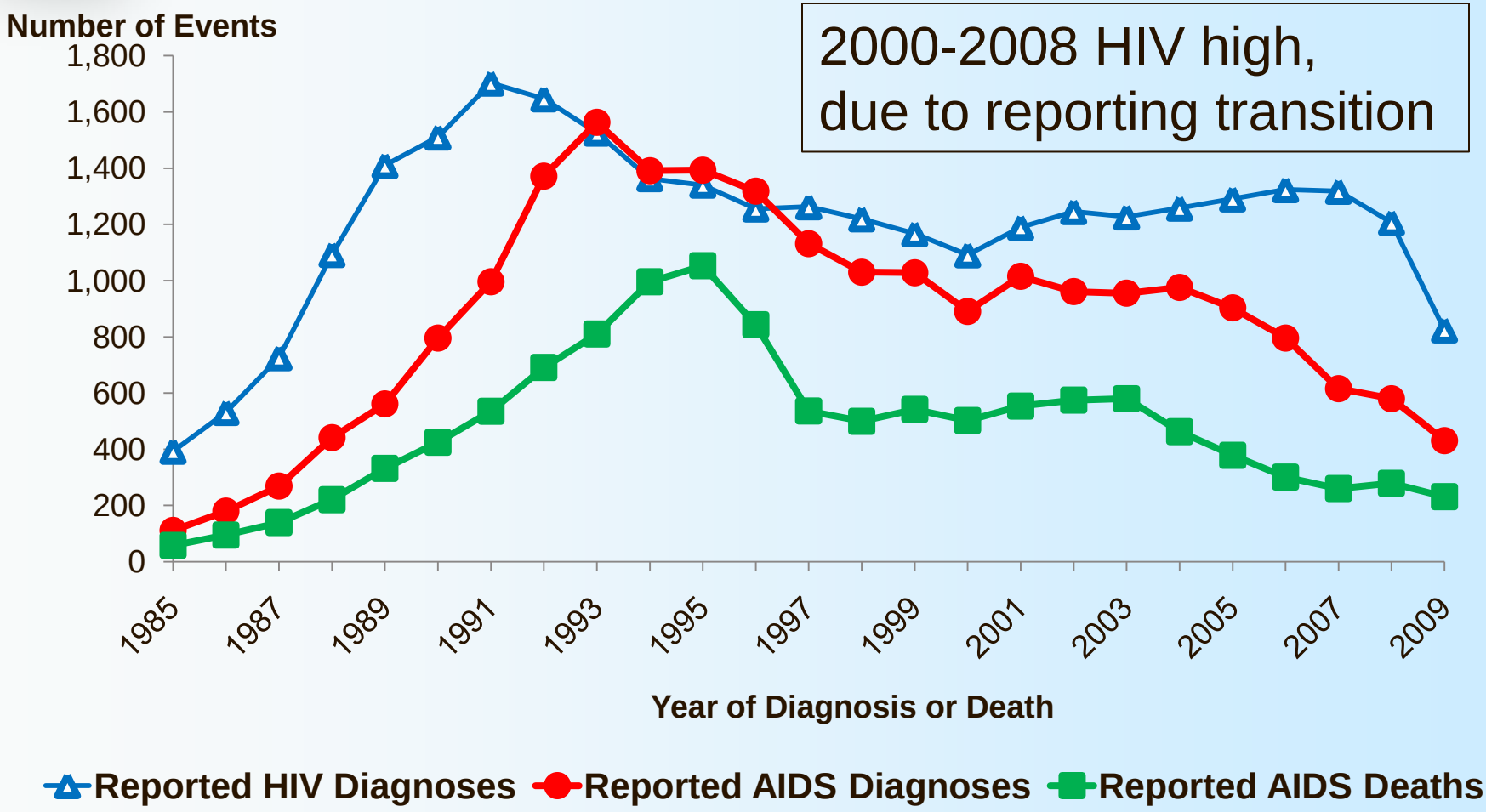
Maryland Living HIV Cases by EMA, 12/31/09



Using data as reported through 12/31/2010

Regional Data

HIV/AIDS Trends Baltimore-Towson EMA

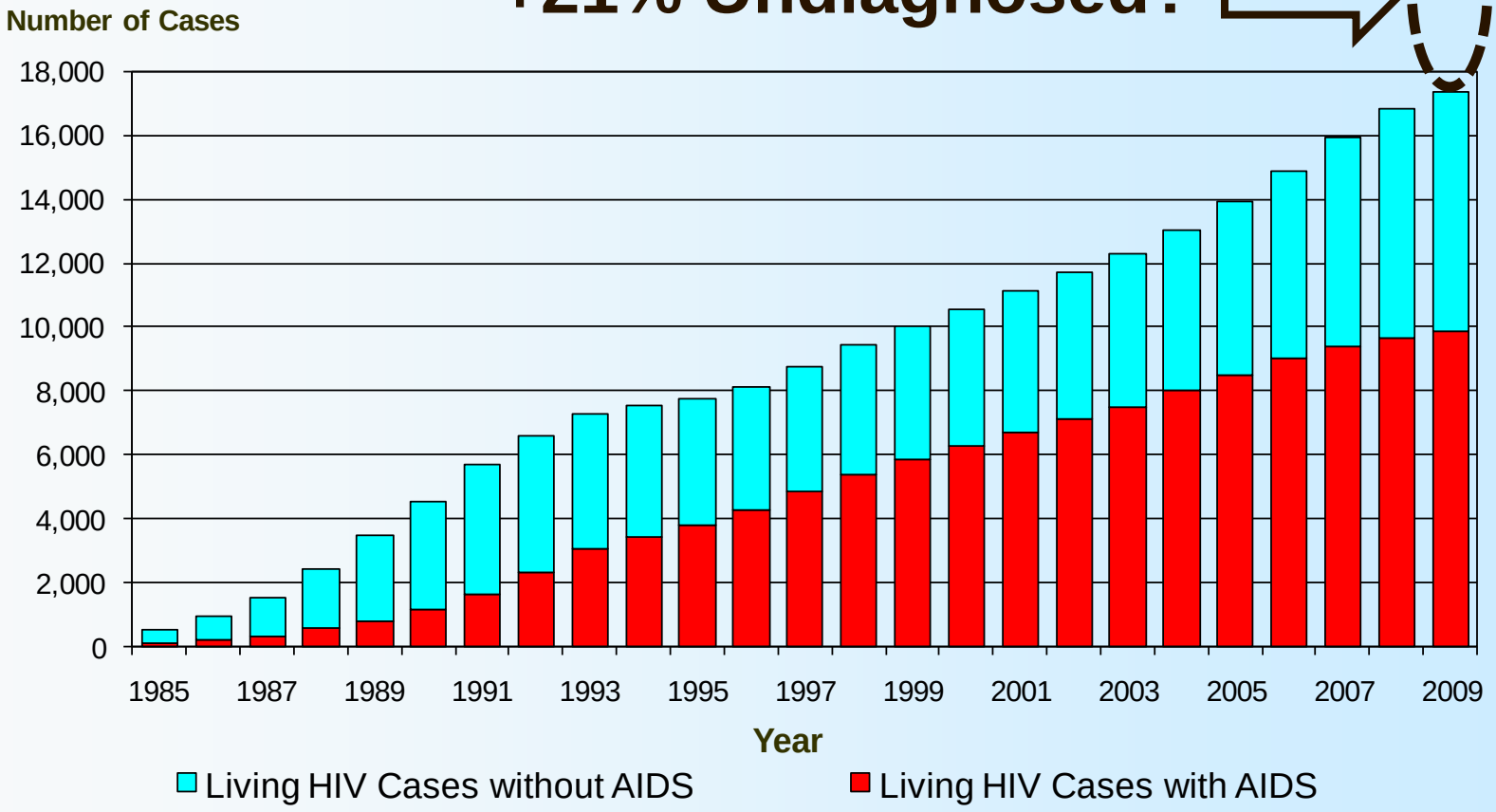


2000-2008 HIV high, due to reporting transition

Using data as reported through 12/31/2010

Living HIV Cases Baltimore-Towson EMA

+21% Undiagnosed?



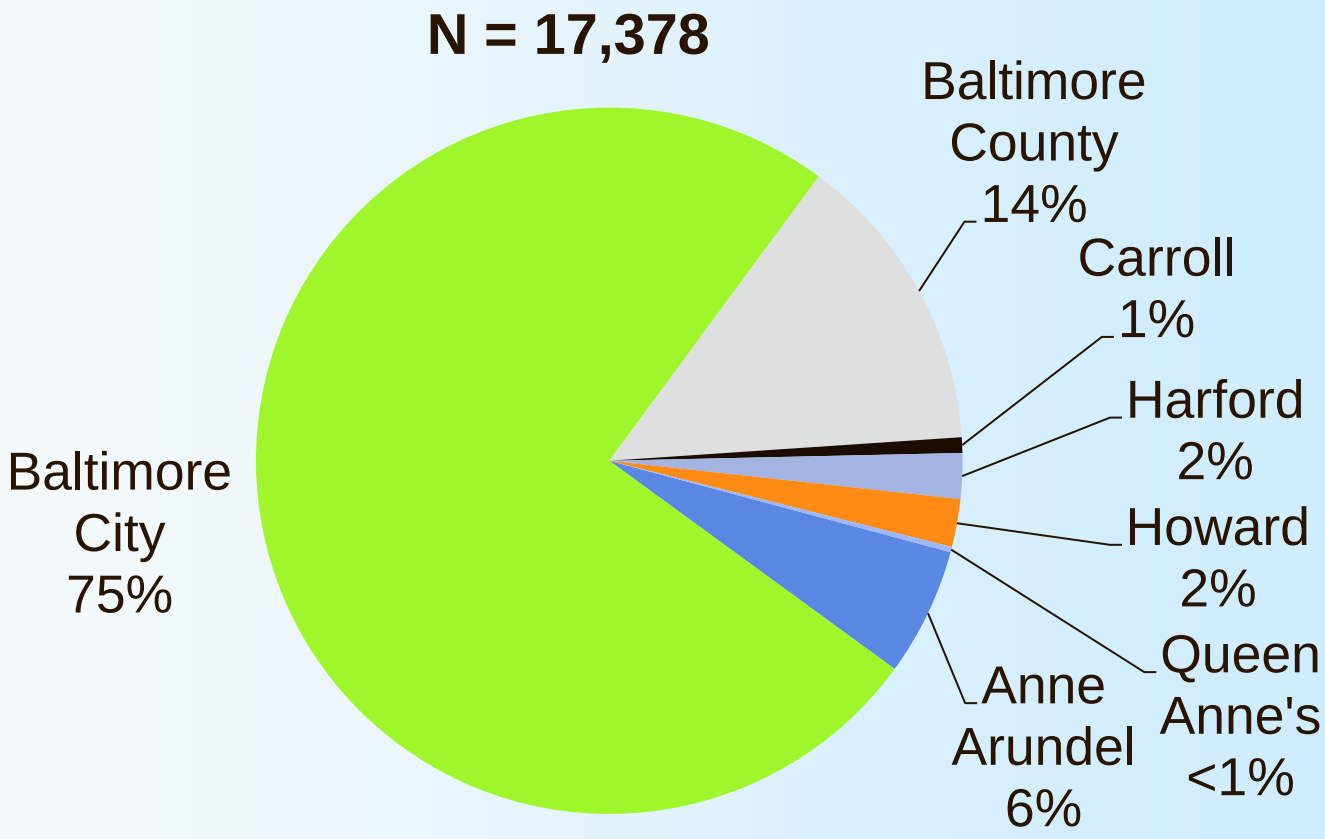
Using data as reported through 12/31/2010

HIV Statistics
Baltimore-Towson EMA

	Reported HIV Diagnoses during 2009	Living HIV Cases on 12/31/2009
Baltimore-Towson	829	17,378
Anne Arundel	67	1,019
Baltimore City	505	13,047
Baltimore County	209	2,403
Carroll	8	124
Harford	14	362
Howard	22	381
Queen Anne's	4	42

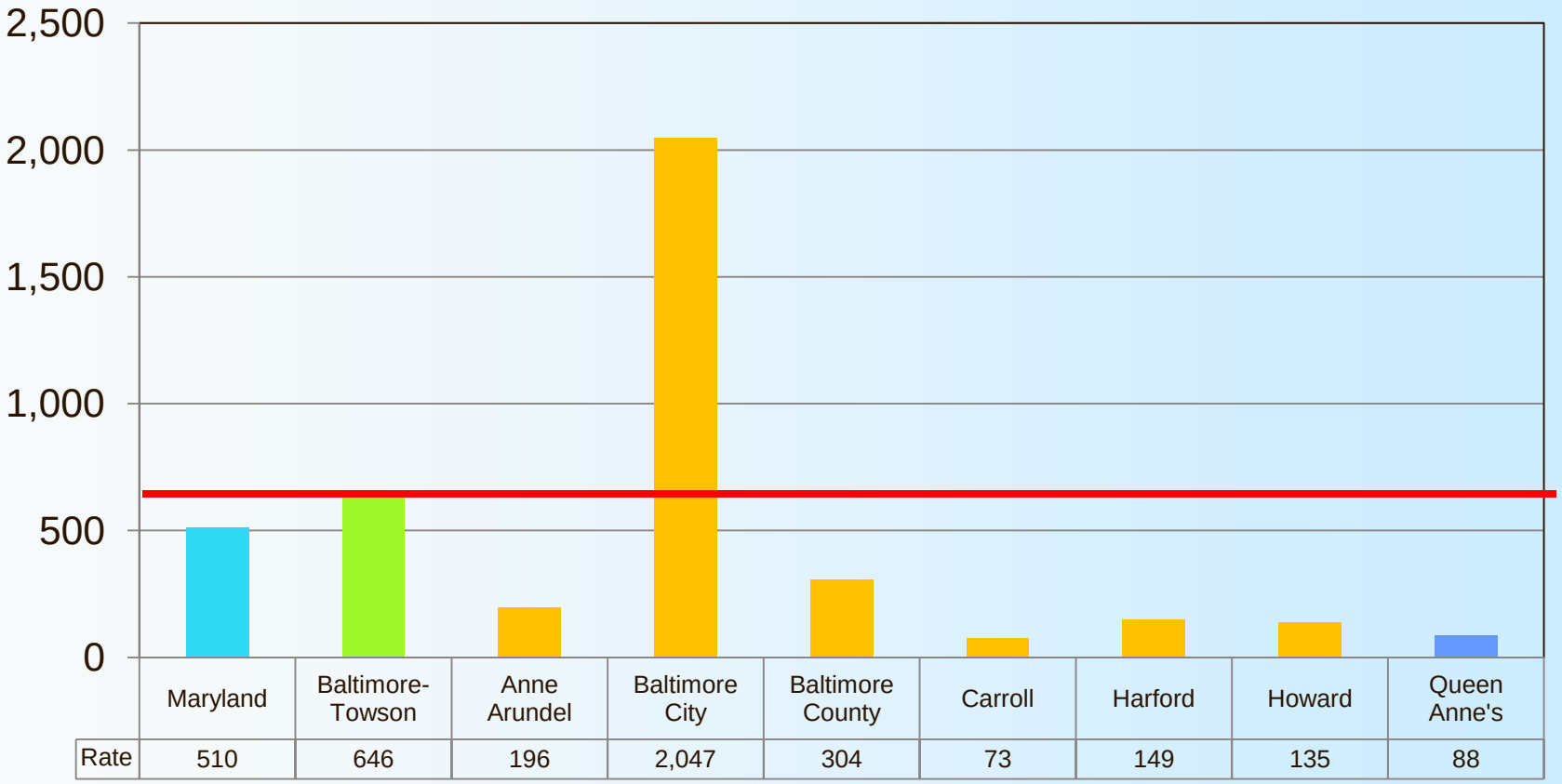
Using data as reported through 12/31/2010

Baltimore-Towson EMA Living HIV Cases by County, 12/31/09



Using data as reported through 12/31/2010

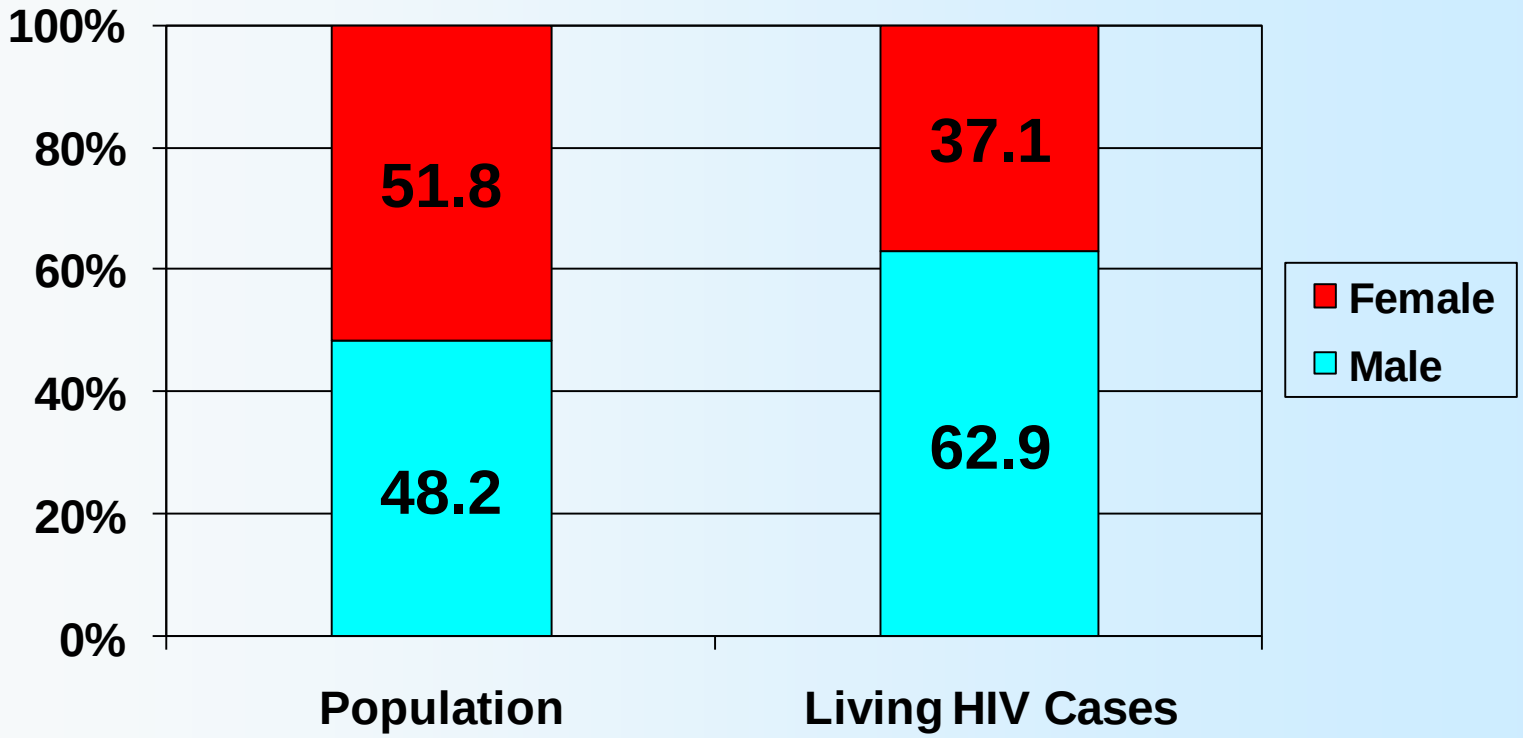
Living HIV Cases Rates per 100,000 Population by County, Baltimore-Towson EMA, 12/31/09



	Maryland	Baltimore-Towson	Anne Arundel	Baltimore City	Baltimore County	Carroll	Harford	Howard	Queen Anne's
Rate	510	646	196	2,047	304	73	149	135	88

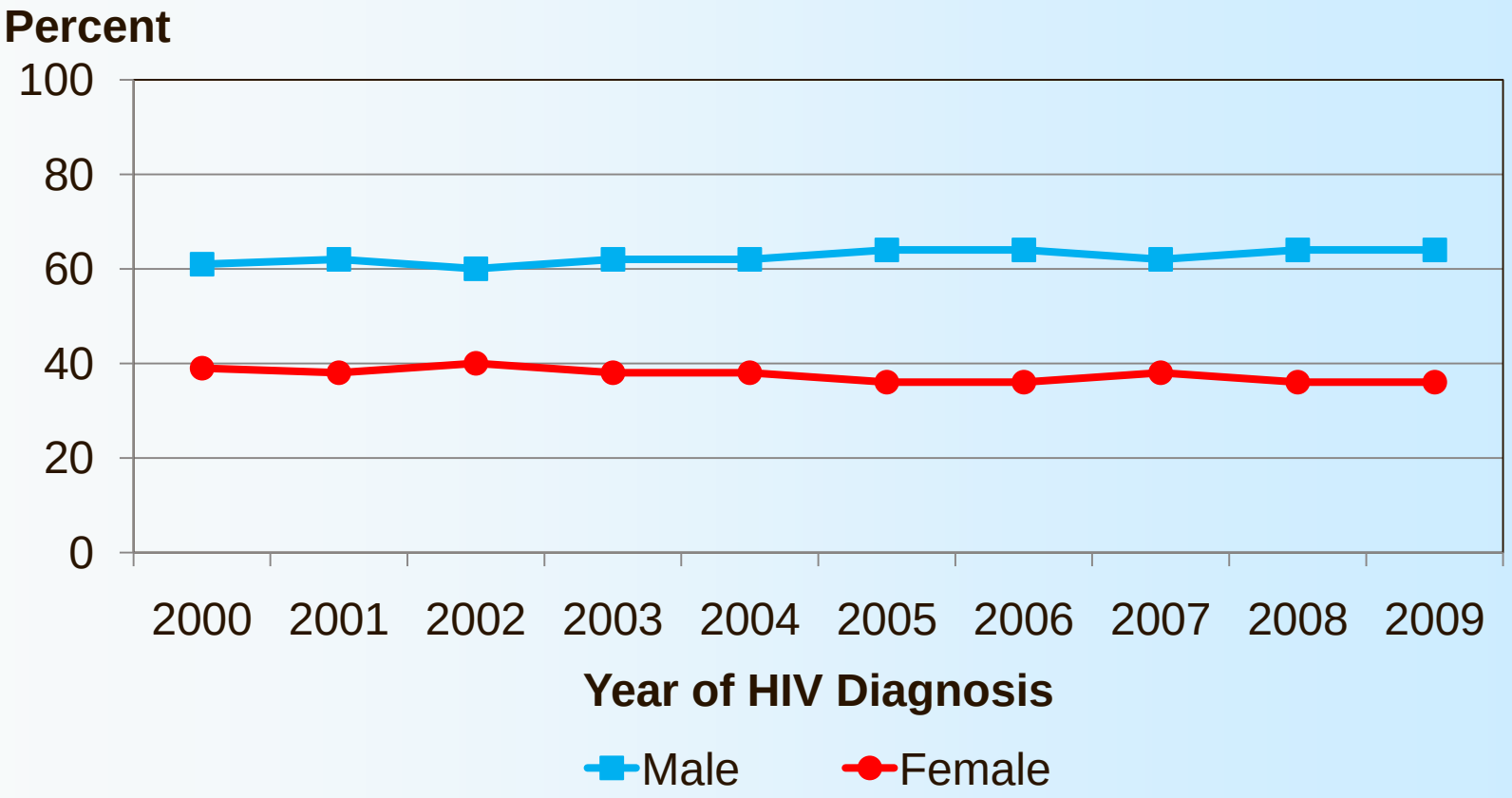
Population on 7/1/09. Cases on 12/31/09 as reported through 12/31/10

Population and Living HIV Cases by Sex, Baltimore-Towson EMA



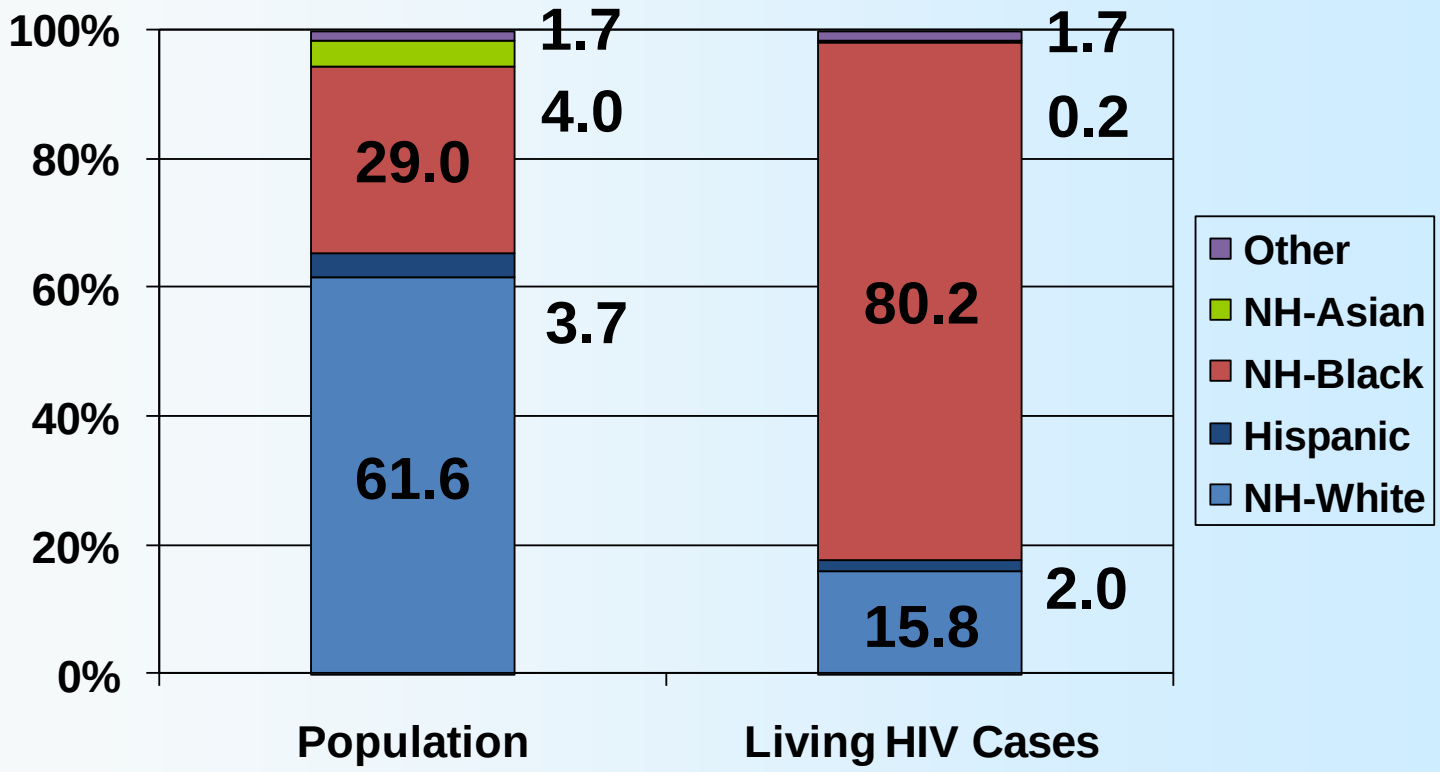
Population on 7/1/09, Cases on 12/31/09
as reported through 12/31/10

Reported HIV Diagnosis Trends by Sex Baltimore-Towson EMA



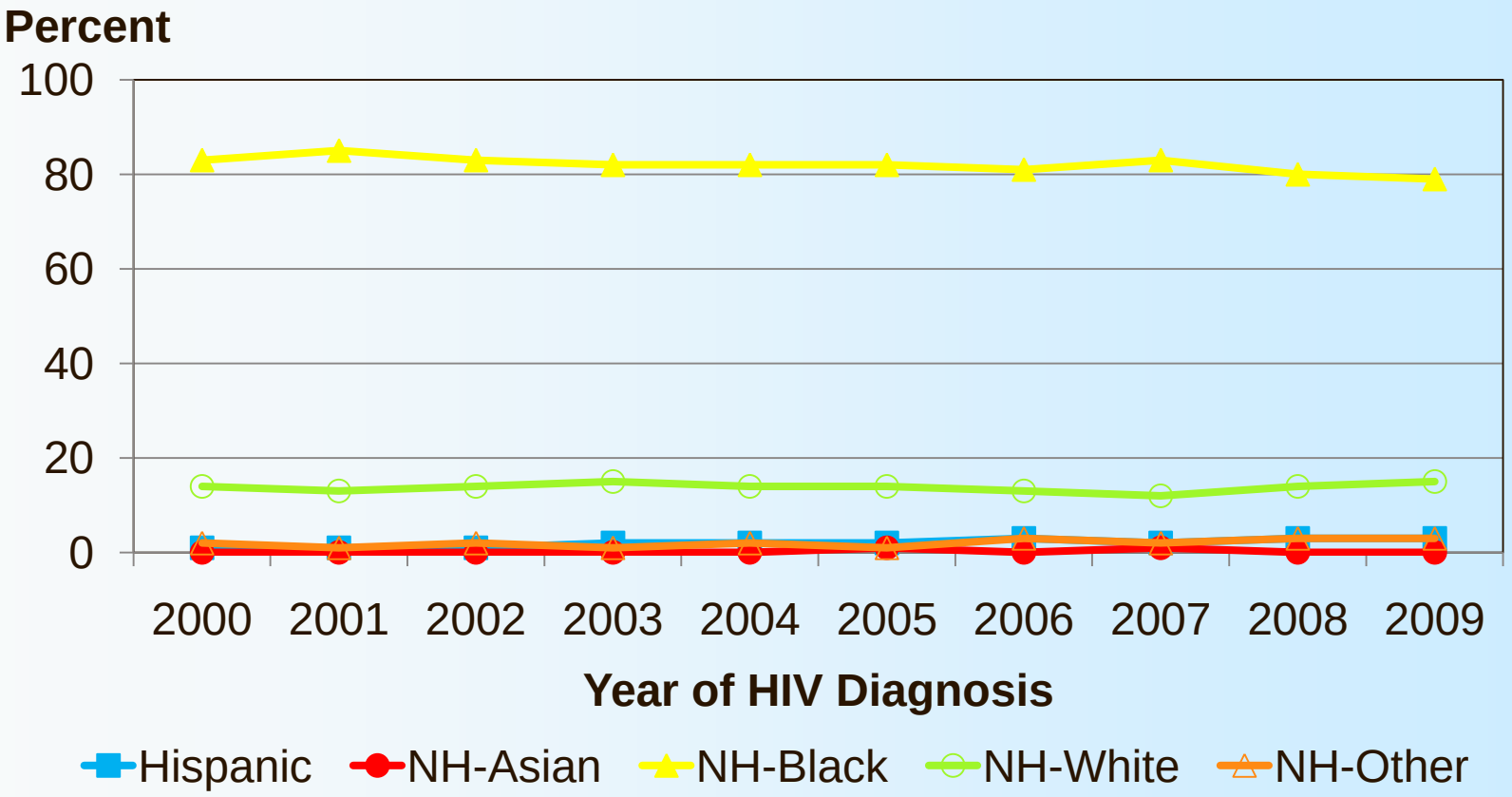
Using data as reported through 12/31/2010

Population and Living HIV Cases by Race/Ethnicity Baltimore-Towson EMA



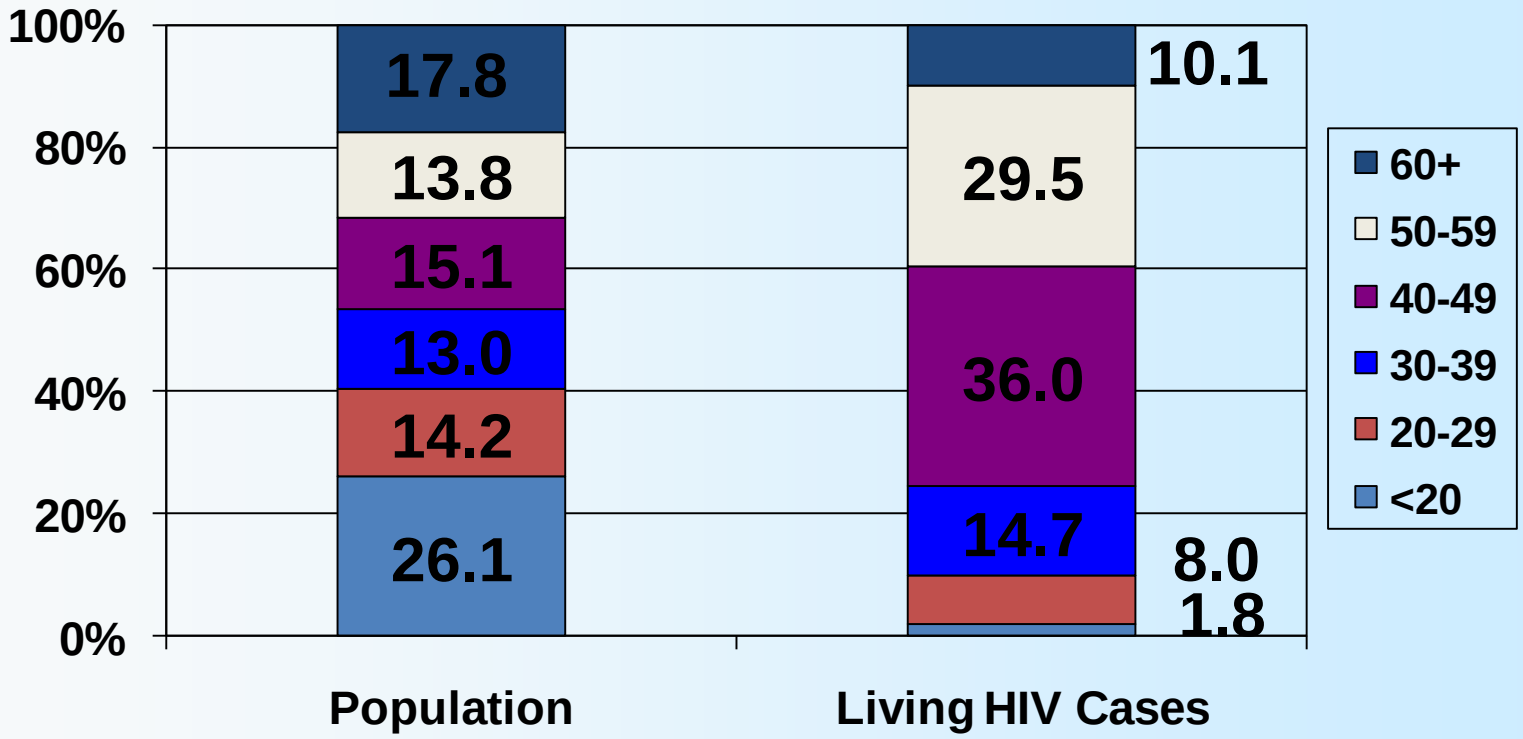
Population on 7/1/09, Cases on 12/31/09 as reported through 12/31/10

Reported HIV Diagnosis Trends by Race/Ethnicity Baltimore-Towson EMA



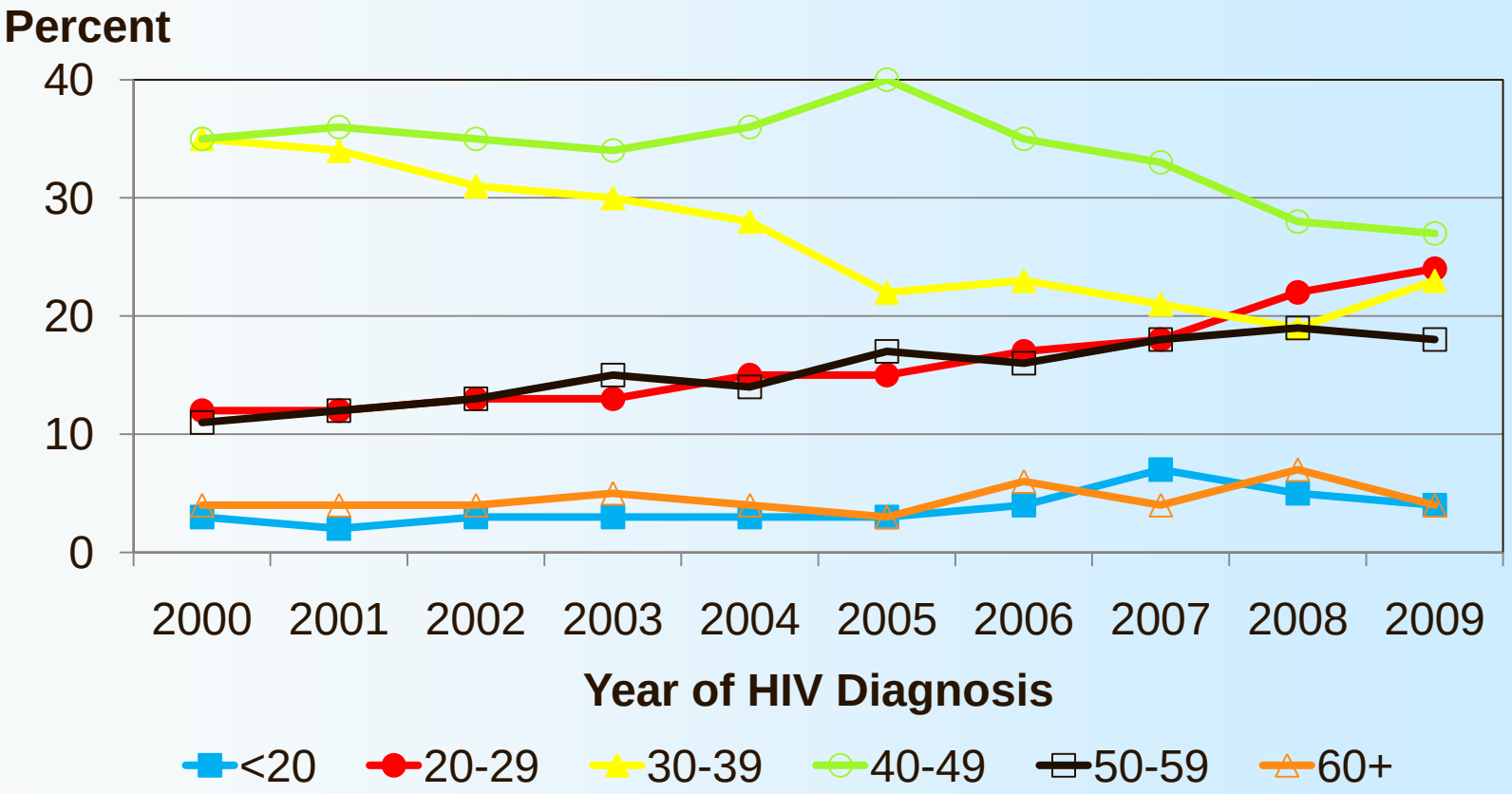
Using data as reported through 12/31/2010

Population and Living HIV Cases by Age, Baltimore-Towson EMA



Population on 7/1/09, Cases on 12/31/09 as reported through 12/31/10

Reported HIV Diagnosis Trends by Age at Diagnosis Baltimore-Towson EMA



Using data as reported through 12/31/2010

Risk Categories

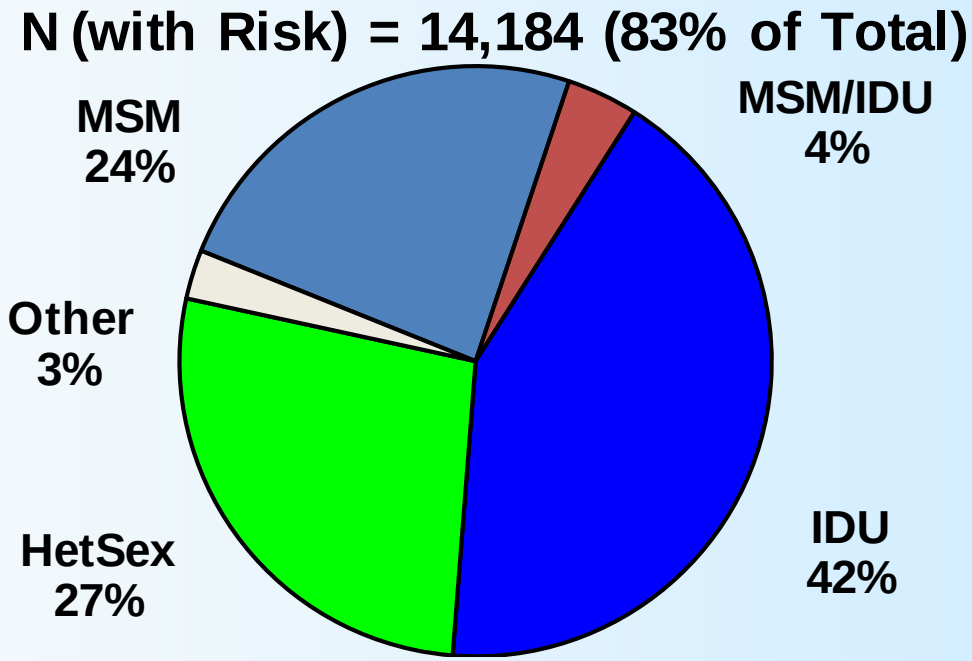
MSM: Men who have Sex with Men

IDU: Injection Drug Use

MSM/IDU: Men who have Sex with Men AND Inject Drugs

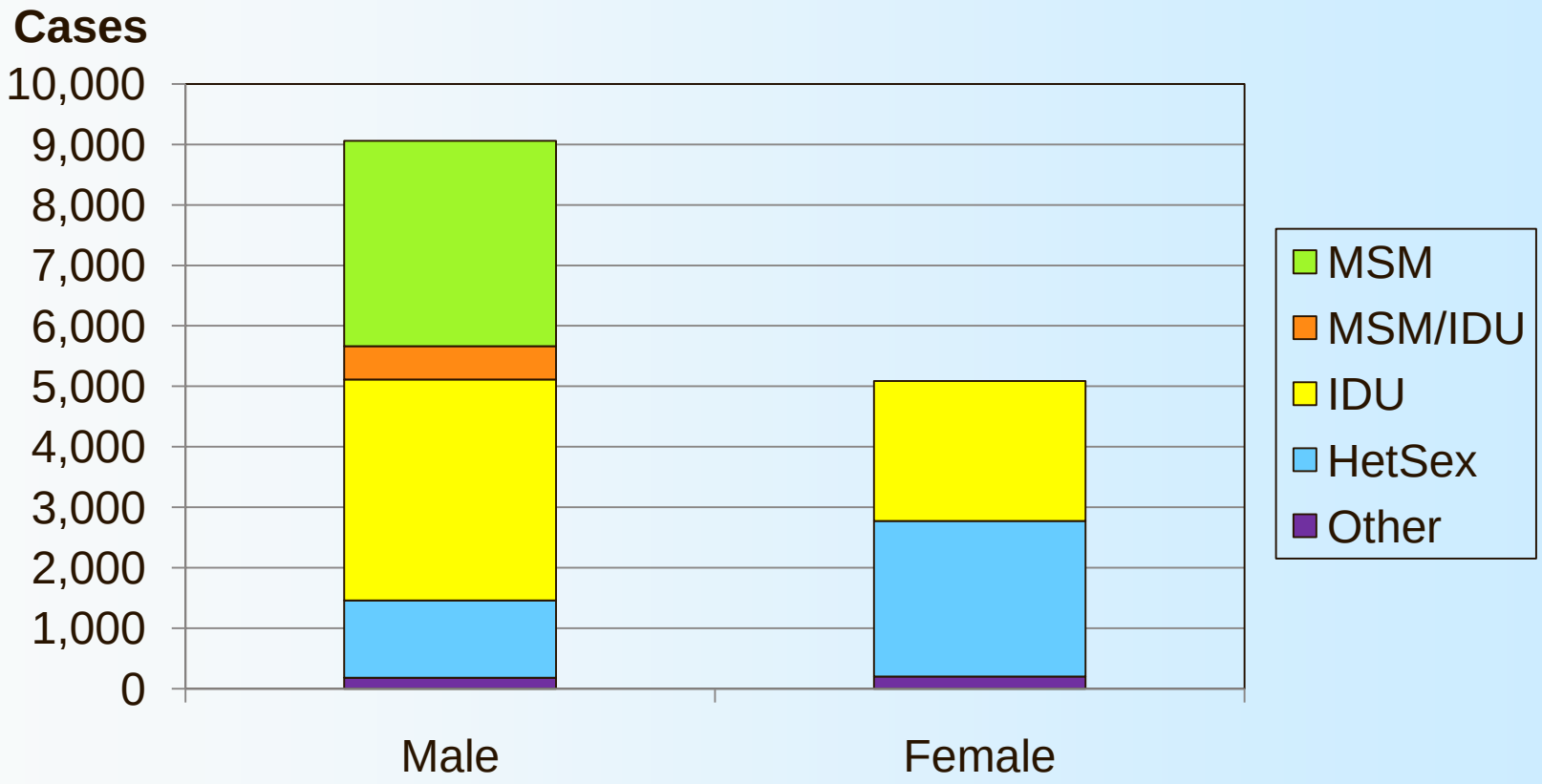
HetSex: Heterosexual Contact with a Person that has or is at Risk for HIV Infection

Living HIV Cases 12/31/09 by Exposure Category Baltimore-Towson EMA



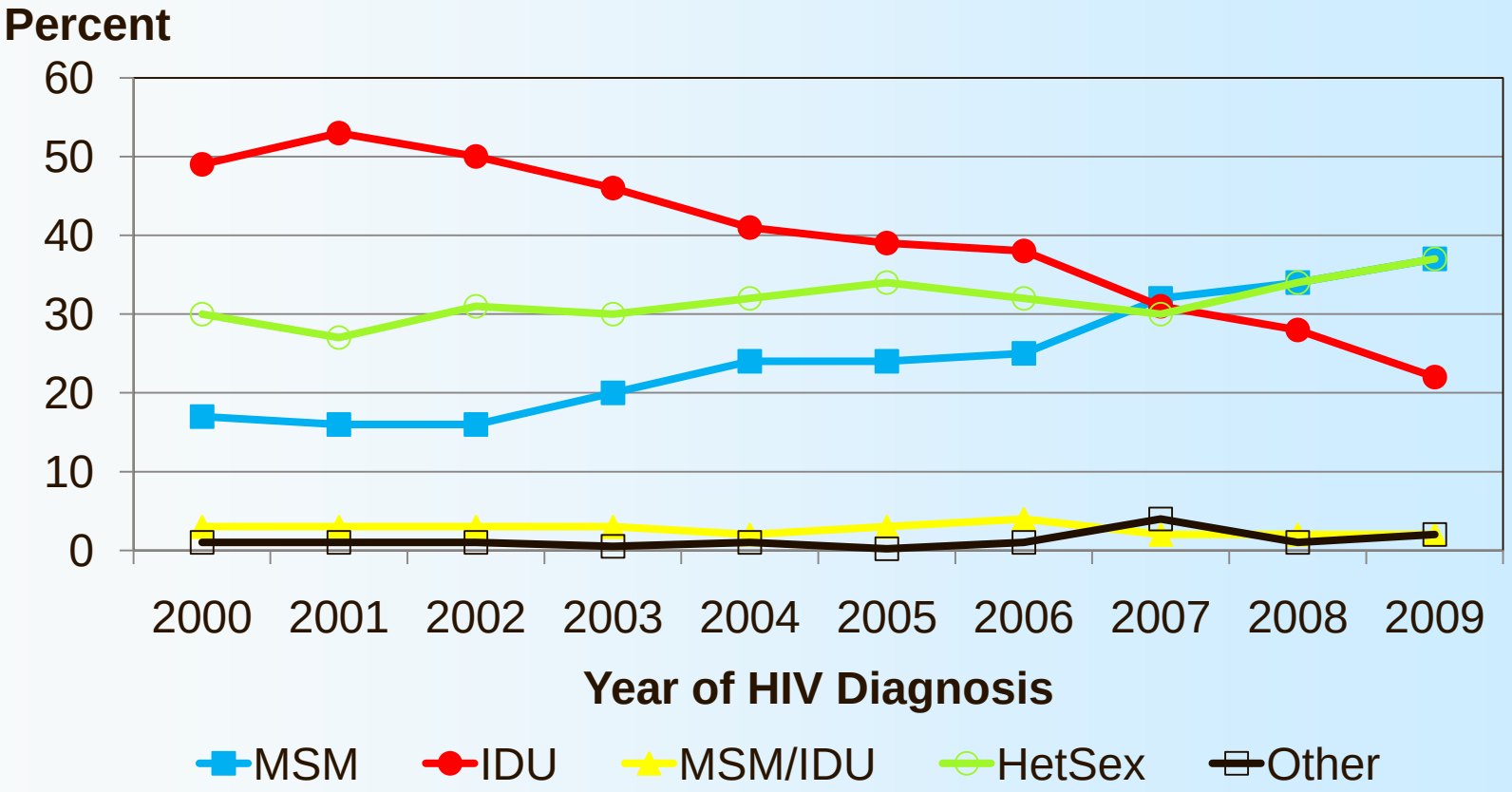
Using data as reported through 12/31/2010

Living HIV Cases 12/31/09 by Risk and Sex at Birth Baltimore-Towson EMA



Using data as reported through 12/31/2010

Reported HIV Diagnosis Trends by Exposure Category Baltimore-Towson EMA



Using data as reported through 12/31/2010

2009 Reported Adult/Adolescent HIV Diagnoses (N=825) Baltimore-Towson EMA

- Linkage to Care: 57% had a CD4 or VL test within 3 months of HIV diagnosis
- CD4 at Diagnosis: 62% had a CD4 test within 12 months of HIV diagnosis, and the median value was 312 cells/microliter
- Late HIV Diagnosis: 27% had an AIDS diagnosis within 12 months of their HIV diagnosis

Using data as reported through 12/31/2010

Regional Summary

HIV/AIDS in the Baltimore-Towson EMA

- There were 17,378 living HIV cases at the end of 2009 and 829 reported HIV diagnoses during 2009
- Baltimore City had the greatest share of living cases (75%)
- Rates of living cases were 3 times higher in Baltimore City than the EMA average
- HIV was being diagnosed late (27% late, median CD4 312), contributing to many of the AIDS diagnoses (51% had late HIV diagnosis)

HIV/AIDS in the Baltimore-Towson EMA: Demographics

- Males were disproportionately affected (63% of cases vs. 48% of population), and the proportion male was increasing
- Non-Hispanic blacks were disproportionately affected (80% vs. 29%), and the proportion was stable
- Persons 30-59 years old were disproportionately affected (80% vs. 42%), but the proportions were decreasing among 30-49 year olds while increasing among 20-29 and 50-59 year olds

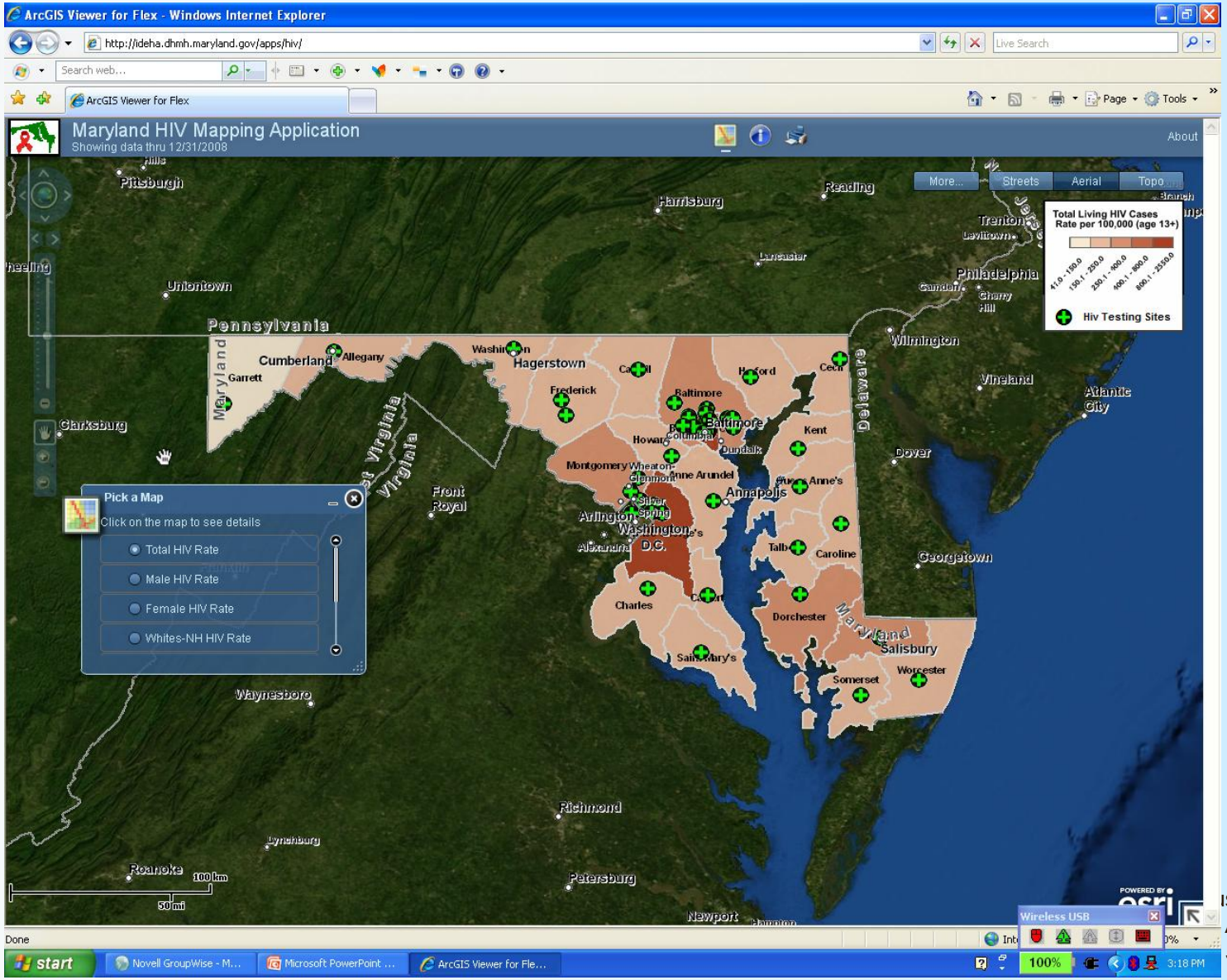
HIV/AIDS in the Baltimore-Towson EMA: Transmission Risk

- Sexual transmission predominates (>51%)
  - Homosexual and heterosexual transmission among men
  - Heterosexual transmission among women
  - Male homosexual transmission proportion was increasing
  - Heterosexual transmission was increasing
- Injection drug use is an important route of transmission (>42%), but the proportion IDU was decreasing

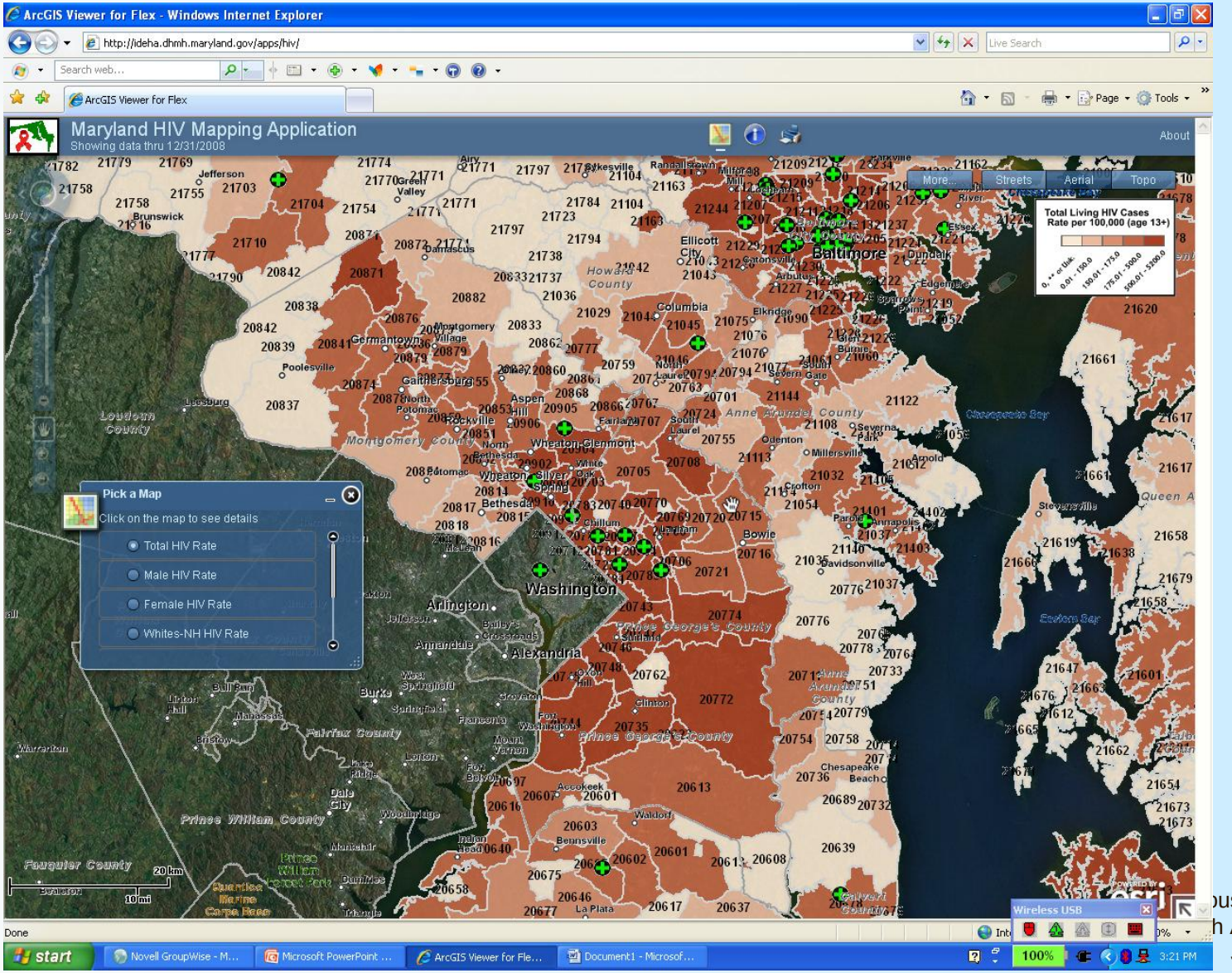
New Epidemiological Products
Coming to the New IDEHA Website

- New Epi Profiles for State, Regions, Counties
- New Indicators
  - Linkage to care
  - Late HIV diagnosis
  - CD4 counts at HIV diagnosis
  - Disease state: CD4 and VL levels for living cases
  - Progression: HIV to AIDS, AIDS to death
  - Presumed female heterosexual exposure category
- New HIV Mapping Tool
- New Query-able Database

New HIV Mapping Tool



HIV Rates by ZIP Code



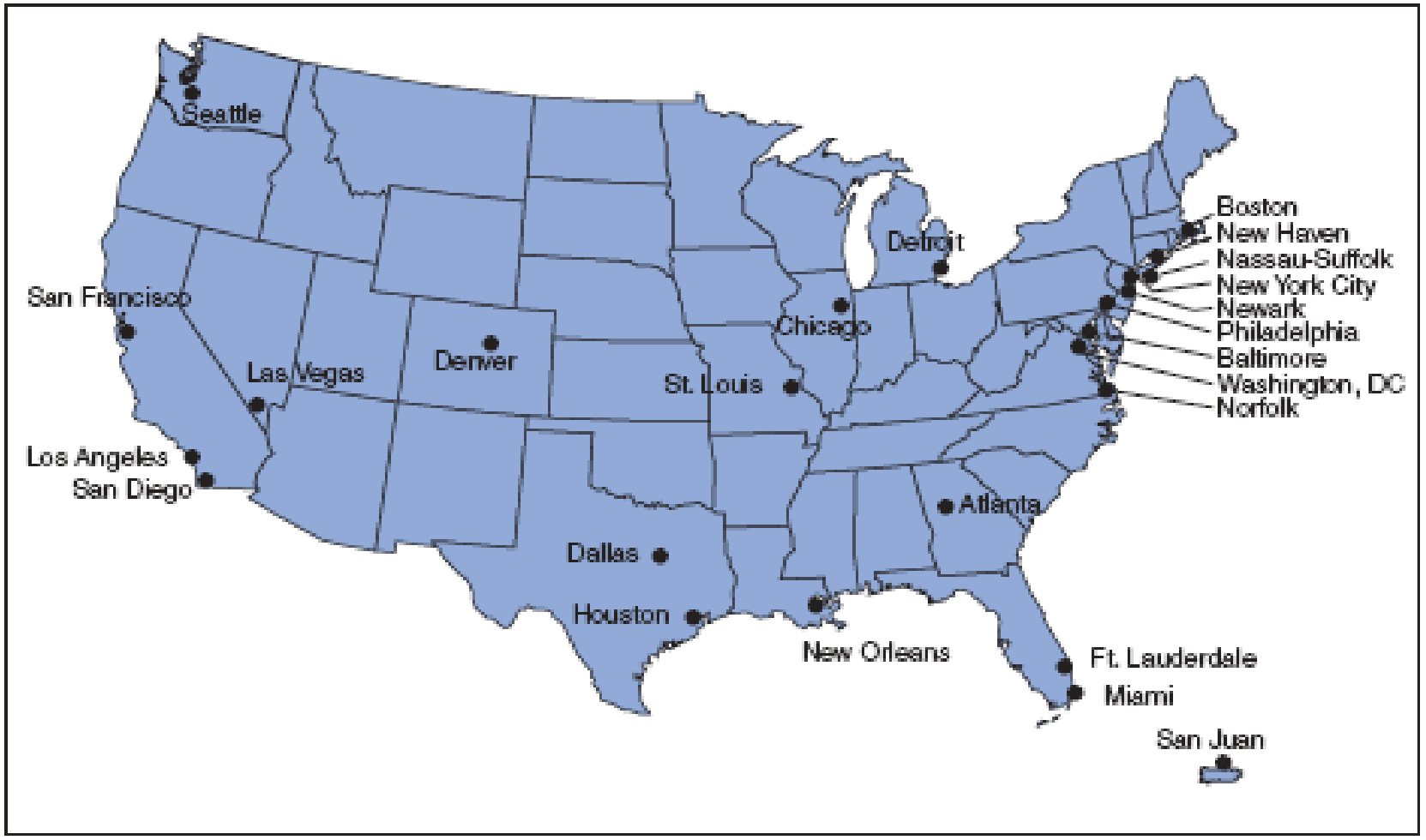
Behavioral Surveillance Methods

National HIV Behavioral Surveillance (NHBS)

- CDC national project in 25 MSA divisions
- Data collection began in 2004
- DHMH funded for Baltimore-Towson MSA
- Johns Hopkins Bloomberg School of Public Health contracted for field operations

NHBS Sites

FIGURE 1. Participating metropolitan statistical areas in the National Human Immunodeficiency Virus Behavioral Surveillance System — United States



MMWR – Surveillance Summaries - July 7, 2006 / 55(SS06);1-16

NHBS – Baltimore
BESURE

The

BEhavioral

SURveillance

REsearch

Study

BESURE Logistics

NHBS Objectives

- To assess prevalence of and trends in
  - HIV risk behaviors
  - HIV testing behaviors
  - Exposure to and use of prevention services among persons at high risk for infection
  - HIV prevalence and incidence

Case vs. Behavioral Surveillance

Case Surveillance

- Infected population
- HIV positives
- Mandated reporting
- Data abstracted from medical records
- All diagnosed cases (N≅30,000 in Maryland)
- Dozens of demographic and clinical variables

Behavioral Surveillance

- Population at risk
- HIV negatives and positives
- Research study
- Data from participant interviews and blood tests
- 500 sampled participants per population per year
- Hundreds of behavioral variables

NHBS Target Populations

- Men who have sex with men (MSM)
- Injection drug users (IDU)
- Heterosexuals at risk for HIV (HET)

NHBS Recruitment Methods

- Venue-based sampling (VBS)
- Respondent-driven sampling (RDS)

NHBS Cycles

	MSM	IDU	HET
Wave 1	VBS 2004-2005	RDS 2006	VBS and RDS 2007
Wave 2	VBS 2008	RDS 2009	RDS 2010
Wave 3	VBS 2011	RDS 2012	RDS? 2013

VBS = venue-based sampling
RDS = respondent-driven sampling

NHBS Data Collection

- Formative Research
- Interview Instrument
  - Demographics
  - Health care utilization
  - Sexual orientation
  - Sex behaviors
  - Drug use
  - HIV testing
  - Health conditions
  - HIV prevention awareness/use

NHBS Data Collection

- Recruitment Data (venue characteristics or referral networks)
- HIV Testing
- Supplemental Testing
- Local Questions

Behavioral Surveillance Data

HET: 2007 AND 2010

HET Overview

	Wave 1 July – Oct 2007	Wave 2 Sept – Dec 2010
Data collection method	Venue – based	Respondent Driven
Total recruited *	332	338
HIV prevalence	3.9%	6.3%
Prevalence unrecognized infection	83.3%	62.5%

*Complete survey and HIV test

Sample Characteristics: HET1 and HET2

Characteristic		Wave 1 (n=332)	Wave 2 (n=386)
Gender	Male	54%	48%
	Female	46%	52%
Race/Ethnicity	Black, not Hispanic *	89%	95%
	White, not Hispanic	4%	2%
	Other	8%	3%
Age	18-24	24%	25%
	25-34	27%	26%
	35-44 *	33%	17%
	45 or older *	16%	32%
Education	Less than high school	37%	42%
	High school grad or GED	42%	44%
	More than high school *	20%	14%

* $p<0.05$

Sample Characteristics: HET1 and HET2

Characteristic		Wave 1 (n=332)	Wave 2 (n=386)
Employment	Full or part-time * Disabled for work * Unemployed *	41% 11% 36%	25% 16% 45%
Homelessness	Current * Past year *	10% 24%	19% 39%
Arrested in past year	Yes	29%	24%
Health insurance	Yes *	48%	63%
Healthcare provider in past year	Yes	78%	74%
Ever injection drug use	Yes	21%	22%
Drug use in past year	Injection drug use Crack use	13% 22%	9% 17%

* $p<0.05$

IDU: 2006 AND 2009

IDU Overview

	Wave 1 Aug 2006 – Jan 2007	Wave 2 Sept – Dec 2009
Data collection method	Respondent Driven	Respondent Driven
Total IDU in past year recruited *	539	507
HIV prevalence	11.9%	16.2%
Prevalence unrecognized infection	50%	48%

*Complete survey and HIV test

Sample Characteristics: IDU1 and IDU2

Characteristic		Wave 1 (n=539)	Wave 2 (n=507)
Gender	Male Female *	61% 38%	73% 27%
Race/Ethnicity	Black, not Hispanic * White, not Hispanic Other	54% 41% 6%	80% 16% 4%
Age	18-34 35-44 45 or older *	27% 42% 31%	14% 23% 64%
Education	Less than high school High school or more	48% 52%	43% 57%
Homelessness past year	Yes	58%	54%
Arrested in past year	Yes	47%	44%
Hepatitis C diagnosis	Yes *	29%	50%

* $p<0.05$

Sample Characteristics: IDU1 and IDU2

Characteristic		Wave 1 (n=539)	Wave 2 (n=507)
Years since first IDU	10 or more *	61%	86%
Daily IDU	Yes *	79%	90%
Crack use past year	Yes	46%	43%
Used someone's needle past year	Yes *	53%	28%
Always used sterile needle past year	Yes	24%	25%
Used someone's cooker, cotton, water past year	Yes	64%	69%

* $p<0.05$

MSM: 2004/2005 AND 2008

MSM Overview

	Wave 1 June 2004 – Apr 2005	Wave 2 Jul – Nov 2008
Data collection method	Venue – based	Venue – based
Total MSM in past year *	645	448
HIV prevalence	37.7%	37.5%
Prevalence unrecognized infection	58.4%	78.4%

*Complete survey and HIV test

Sample Characteristics: MSM1 and MSM2

Characteristic		Wave 1 (n=645)	Wave 2 (n=448)
Race/Ethnicity	Black, not Hispanic * White, not Hispanic * Other	63% 31% 6%	71% 23% 5%
Age	18-24 * 25-34 35-44 * 45 or older	24% 26% 31% 18%	31% 30% 24% 15%
Education	High school or less College or some college Graduate education	49% 45% 6%	48% 45% 6%
Sexual identity	Homosexual Bisexual Heterosexual or other *	63% 32% 5%	68% 30% 2%
Current homelessness	Yes *	3%	6%

* $p<0.05$

Sample Characteristics: MSM1 and MSM2

Characteristic		Wave 1 (n=645)	Wave 2 (n=448)
Sex partners in past year	Men only * Men and women *	67% 33%	76% 24%
# male partners past year	1 2-3 * 4-8 9 or more *	26% 28% 23% 23%	24% 34% 26% 16%
Unprotected anal sex past year	Yes *	53%	36%
Ever IDU	Yes *	17%	6%
Non-injection drugs past year	Yes *	49%	59%
Ever tested for HIV	Yes	87%	90%
Health insurance	None Public Private	36% 23% 41%	37% 19% 44%
Doctor's visit past year	Yes	77%	81%

* $p<0.05$

Unrecognized HIV Infection (MSM2): Socio-demographic

Characteristic		Total % (n=448)	HIV+ % (n=168)	Unrecog % (n=125)	P.R.
Race/Ethnicity	Non-Hispanic White	31%	18%	47%	Ref
	Non-Hispanic Black	62%	45%	77%	-
	Other	6%	25%	100%	2.1 *
Age	< 24	24%	29%	85%	Ref
	25-34	26%	42%	75%	-
	35-44	30%	40%	79%	-
	> 45	18%	43%	50%	0.6 *
Education	Graduate education	49%	29%	50%	Ref
	College or some coll	45%	34%	77%	-
	High school or less	6%	42%	76%	-
Homelessness	Current	3%	41%	73%	-
Sexual identity	Homosexual	63%	39%	72%	Ref
	Bisexual	32%	35%	81%	-
	Heterosexual/other	5%	20%	50%	-

* $p<0.05$, Ref = reference group, P.R. = prevalence ratio

Unrecognized HIV Infection (MSM2): Sex and Drug

Characteristic		Total % (n=448)	HIV+ % (n=168)	Unrecog % (n=125)	P.R.
# of male sex partners, past year	1 2-3 4-8 9 or more	26% 28% 23% 23%	34% 35% 44% 39%	76% 74% 76% 70%	Ref - - -
Sex partners in past year	Men only Men and women	67% 34%	40% 30%	71% 88%	Ref 1.2 *
Unprotected sex in past year	None With main partners only With casual/exchange partners	47% 25% 27%	35% 33% 52%	73% 81% 74%	Ref - -
Substance use	Ever IDU Non-injection drug use in past year	17% 49%	30% 41%	74% 79%	- -

* $p<0.05$, Ref = reference group, P.R. = prevalence ratio

Unrecognized HIV Infection (MSM2): Health Services

Characteristic		Total % (n=448)	HIV+ % (n=168)	Unrecog % (n=125)	P.R.
Ever told had STD	Yes	16%	51%	66%	-
Health insurance	No health insurance Public Private	36% 23% 41%	40% 48% 31%	80% 73% 68%	Ref 0.9 * -
Visit doctor's office in past year	Yes	77%	39%	71%	0.8 *

* $p<0.05$, Ref = reference group, P.R. = prevalence ratio

Characteristics Associated with Unrecognized HIV Infection: Multivariate

Characteristic		Total % (n=448)	HIV+ % (n=168)	Unrecog % (n=125)	P.R.	A.P.R.
Race/Ethnicity	Non-Hispanic White	31%	18%	47%	Ref	Ref.
	Non-Hispanic Black	62%	45%	77%	1.6	-
	Other	6%	25%	100%	2.1 *	-
Age	< 24	24%	29%	85%	Ref	Ref.
	25-34	26%	42%	75%	0.9	-
	35-44	30%	40%	79%	0.9	-
	> 45	18%	43%	50%	0.6 *	0.7 *
Visit doctor's office	Yes	77%	39%	71%	0.8 *	0.8 *

* $p<0.05$, Ref = reference group, P.R. = prevalence ratio, A.P.R. = adjusted prevalence ratio

Where to get more:

http://ideha.dhmh.maryland.gov/chse

Maryland Infectious Disease and Environmental Health Administration

http://ideha.dhmh.maryland.gov